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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,641	07/21/2003	Jun Miyokawa	240678US8 CONT	4563

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EXAMINER	
LOUIE, WAI SING	
ART UNIT	**PAPER NUMBER**
2814	

DATE MAILED: 07/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/622,641	MIYOKAWA ET AL.	
	Examiner	Art Unit	
	Wai-Sing Louie	2814	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-20 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-20 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 8/25/03, 10/20/03.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-2, 5, 7, 9, 12, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Janssen et al. (US 5,570,444).

With regard to claims 1, 5, and 12, Janssen et al. disclose an optical assembly (col. 2, line 66 to col. 4, line 62 and fig. 3) comprising:

- A laser diode 3;
- An optical system including an optical fiber 4 and a lens 5, the optical system being configured to receive and transmit a beam emitted from the laser diode 1 through the lens to the optical fiber (fig. 3);
- A sliding (fastening) means 8 for support at least a portion of the optical system (fig. 3);
- A base 9 configured to support the sliding (fastening) means 8, the laser diode 3 and at least a portion of the optical system (fig. 3), the base 2 includes a laser diode 3, mounting member 1 configured to mount the laser diode at a laser mounting region (fig. 3);

- A bottom plate 2 configured to support the laser diode 3, the optical system, and the base 9 (fig. 3);
- Janssen et al. do not disclose the base 9 is made of a material having a first thermal expansion coefficient and the bottom plate 2 is constructed of a material having a second thermal expansion coefficient. However, if the base plate 9 and the bottom plate 2 are made of different materials, they are having different thermal expansion coefficients;
- Janssen et al. do not disclose the first thermal expansion coefficient is substantially equal to the second thermal expansion coefficient. However, if the base plate 9 and the bottom plate 2 are made of compatible material, i.e. 304 SS and 316 SS, it is obvious that they would have substantially similar thermal expansion coefficient.

With regard to claim 2, Janssen et al. disclose the portion of the base 9 and the bottom plate 2 are made of a same material called KOVAR (col. 4, lines 31-34).

With regard to claim 7, Janssen et al. disclose the base 2 comprises an optical system mounting member 8 and 9 to support the optical fiber 6, where a portion of the base is a laser diode 3 and mounting member 1 configured to support the laser diode, the optical system mounting member 8 and 9 being attached on the same base (fig. 3).

With regard to claims 9 and 17, Janssen et al. disclose the lens portion has a fiber lens formed on the optical fiber, where a tip end of the fiber lens and a light-emitting facet of the laser diode are arranged to oppose each other (col. 3, lines 29-39).

Claims 3-4, 6, 8, 11, 13-16, and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Janssen et al. (US 5,570,444) in view of Yoshino (US 5,924,290).

With regard to claim 3, Janssen et al. do not disclose the portion of the base is coupled to the bottom plate 2 via a temperature control device. However, Yoshino discloses an optical assembly having a peltier (temperature control) unit 6 for making up the thermal expansion difference between the optical assembly and the package structure (Yoshino col. 3, lines 53-56). Yoshino teaches the heat generated by the optical assembly is transmitted to the package through the second surface of the peltier unit and the mounting surface of the package (bottom plate) and the thermal stress is suppressed (Yoshino col. 3, line 66 to col. 4, line 13). Therefore, it would have been obvious for the one with ordinary skill in the art to modify Janssen's device with the teaching of Yoshino et al. to provide a temperature control device. Doing so the thermal stress in the assembly would be suppressed.

With regard to claims 4 and 13-15, Janssen et al. modified by Yoshino in claim 3 above, would disclose an optical assembly including a peltier unit 6, which comprises a first plate 6b attached to a portion of the assembly's base 5a, a peltier element 6a attached to the first plate 6b, and a second plate 6c attached to the peltier element 6a and the first plate 6b (Yoshino col. 5, lines 42-48 and fig. 2). Yoshino discloses a package 5, which configures to accommodate and the laser diode, the optical module, and the peltier unit. The base 5a projects in a direction parallel to an optical axis of the optical system from the optical fiber to the mounting side of the peltier unit and extending to the laser diode-mounting member (Yoshino fig. 2).

With regard to claim 6, Janssen et al. modified by Yoshino in claim 3 above, disclose the first plate 6b and second plate are made of the same material (Yoshino col. 5, lines 49-50).

With regard to claims 8 and 19-20, Janssen et al. disclose the optical system mounting member 8 and 9 is formed of KOVAR (col. 4, lines 31-34) and Janssen et al. modified by Yoshino discloses KOVAR is Fe-Ni-Co alloy (Yoshino col. 3, lines 9-10).

With regard to claim 11, Janssen et al. do not disclose a package configured to accommodate the laser diode. However, Janssen et al. modified by Yoshino in claim 3 above, would have a package 5, which configures to accommodate and the laser diode, the optical module, and the peltier unit. The package includes the bottom plate 5a (Yoshino fig. 2).

With regard to claim 16, Janssen et al do not disclose the laser diode-mounting member 1 has a reinforcement portion, which has a lower surface that is out contact with the peltier unit. However, one skilled in the art could arrange the laser diode-mounting member to meet need of the design. This is merely a design choice.

Claims 10 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Janssen et al. (US 5,570,444) in view of Yoshino (US 5,924,290) as applied to claim 3 above, and further in view of Lauzon et al. (US 6,438,294).

With regard to claims 10 and 18, Janssen et al. do not disclose the lens 5 is an anamorphic lens. However, Lauzon et al. disclose an aspheric anamorphic lens 34 coupling to optical fiber 20 (Lauzon col. 7, lines 20-27 and fig. 4). Lauzon et al. teach lens 34 is a condenser lens, which improves the coupling efficiency of the optical device (Lauzon col. 7, lines 35-41). Therefore, it would have been obvious for the one with ordinary skill in the art to modify

Janssen's device with the teaching of Yoshino and Lauzon et al. to provide an anamorphic lens in order to improve the coupling efficiency of the optical device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wai-Sing Louie whose telephone number is (571) 272-1709. The examiner can normally be reached on 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (571) 272-1705. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LONG PHAM
PRIMARY EXAMINER

wsl
July 9, 2004